

PATENT COOPERATION TREATY

PCT/EP2003/005806



Translation

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

518,101

(PCT Article 36 and Rule 70)

Rec'd PCT/PTO 23 JUN 2005

Applicant's or agent's file reference 2002P08622WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/005806	International filing date (day/month/year) 03 June 2003 (03.06.2003)	Priority date (day/month/year) 11 June 2002 (11.06.2002)
International Patent Classification (IPC) or national classification and IPC H04Q 11/04		
Applicant SIEMENS AKTIENGESELLSCHAFT		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 7 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 31 October 2003 (31.10.2003)	Date of completion of this report 01 October 2004 (01.10.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/005806

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages _____, 1, 5-9 _____, as originally filed
 pages _____, filed with the demand
 pages _____, 2, 3, 2A, 4 _____, filed with the letter of _____
- ☒ the claims:
 pages _____, 3-6, 9-11 _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____, 1, 2, 7, 8 _____, filed with the letter of _____ 17 May 2005 (17.05.2005)
- ☒ the drawings:
 pages _____, 1/1 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-11	YES
	Claims		NO
Inventive step (IS)	Claims	1-11	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

2. Citations and explanations

Reference is made to the following documents:

- D1: JESSUP T: "DSL: THE CORPORATE CONNECTION", DATA COMMUNICATIONS, MCGRAW HILL, vol. 27, no. 2, 1 February 1998 (1998-02-01), pages 103, 104, 106 and 108, XP000731801 NEW YORK, US ISSN: 0363-6399
- D2: WO 02/19684 A (CENTILLIUM COMMUNICATIONS INC) 7 March 2002 (2002-03-07)
- D3: US 2002/021702 A1 (PARK C-H) 21 February 2002 (2002-02-21)
- D4: WO 01/06720 A (GENERAL BANDWIDTH INC) 25 January 2001 (2001-01-25)
- D5: WO 01/78310 A (MARCONI COMMUNICATIONS SPA) 18 October 2001 (2001-10-18)
- D6: WO 02/41578 A (EFFICIENT NETWORKS INC) 23 May 2002 (2002-05-23).

Claim 1

Document D1 is considered to be the prior art closest to the subject matter of claim 1. Said document discloses (the references between parentheses refer to said document) *a method for fast access (cf. DSL access) to*

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data networks (cf. the data processing centre or the ISP network/internet in figure 1), wherein:

- *data terminals (cf. "PC") of subscribers (cf. "the telecommuter, the ISP subscriber and the branch office") are each connected, by means of a modem (cf. "DSL modem"), to an access multiplexer (cf. "DSLAM") via a digital subscriber connection;*
- *the Point-to-Point protocol (see page 106, right-hand column, lines 12-13) is used over the Ethernet (see page 108, left-hand column, first paragraph) PPPoE for data transmission between data terminals and an access server, which is downstream of the access multiplexer (cf. "the router in the data processing centre and the ISP network") and by means of which the authorisation of access to the data terminals is monitored and the data network is accessed; and*
- *the connection of the access multiplexer to the access server and other downstream components is effected by means of an Ethernet network (see figure 1 and page 108, left-hand column, first paragraph),*

as defined in the preamble of claim 1.

Thus, the subject matter of claim 1 differs from the known method by virtue of, firstly, an Ethernet bridge and, secondly, a filtering means which lets through only those Ethernet frames that can be assigned to an active connection authorised by the access server (B-RAS), or that can be assigned to an established connection, as defined in the characterising part of claim 1.

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The problem addressed by the present invention can thus be regarded as that of devising a method for accessing data networks which protect the access multiplexer (DSLAM) from attack and prevent illegal Ethernet connections between users connected to the access multiplexer (DSLAM).

None of the available documents discloses or indicates the present solution. A person skilled in the art would not arrive at the present solution from D1 alone, since D1, on the one hand, does not address the problem or the risk arising when the subscriber has a general Ethernet connection to the network infrastructure and, on the other hand, does not disclose the corresponding means, that is to say the Ethernet bridge and filter means with corresponding filter rules.

The same applies to documents D2 to D5.

The subject matter of claim 1 is therefore novel and inventive and thus satisfies the criteria of PCT Article 33(2) and (3).

Claims 2-6

Claims 2-6 are dependent on claim 1 and thus likewise satisfy the requirements of the PCT in respect of novelty (PCT Article 33(2)) and inventive step (PCT Article 33(3)).

Claim 7

Claim 7 defines an access multiplexer with essentially the same features as claim 1 and, therefore, likewise satisfies the requirements of the PCT in respect of

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novelty (PCT Article 33(2)) and inventive step (PCT Article 33(3)).

Claims 8-11

Claims 8-11 are dependent on claim 7 and thus also satisfy the requirements of the PCT in respect of novelty (PCT Article 33(2)) and inventive step (PCT Article 33(3)).